

IN THE DRAWINGS

Please replace Figure 5 that was originally attached to the application with the amended Figure 5 (see attached Replacement Sheet).

REMARKS

This Amendment is being submitted in response to the Official Action dated 01 July 2005. The deadline for response has unintentionally lapsed. A Petition to Revive Application Pursuant to 37 C.F.R. 1.137(b) is submitted herewith. Figure 5 has been amended to correct informalities. Additionally claims 1 and 2 have been amended and thus they remain pending in this application.

Applicant also appreciates Examiner's indication that Figure 5 would be allowable if the word "reducint" were spelled correctly. Applicant has correctly spelled the word to read "reducing" and respectfully submits that no new matter has been introduced in the drawings, nor was such the intent of Applicant.

The Examiner rejected claims 1 and 2 under 35 U.S.C. §112 second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Particularly, the Examiner contends that the applicant fails to point out which 802.11 version is being used, and that standards such as this are dynamic in nature, and thus the metes and bounds of the claims are uncertain. The IEEE standard 802.11 is very well known in the field of electrical engineering. All sections of 802.11 apply to the present invention, and the particulars of it are discussed in the specification (see pp. 1-3). Since the claims are to be read in light of the specification, it is clear that the discussion of 802.11 in the specification applies to the claims as well and that the standard need not be referred to in the

claims in order for one of ordinary skill in the art to understand that the method claimed is in accordance with IEEE standard 802.11. Thus, the mention of this standard has been deleted from claims 1 and 2.

The Examiner rejected claim 1 under 35 U.S.C. §103 (a) as being unpatentable over van Bokhorst et al. (U.S. Patent No. 6,192,230) and Hagan (Power Savings Mechanisms in Emerging Standards for Wireless LANS: The Mac Level Perspective). The Examiner asserts that the combination of van Bokhorst et al. '230 and Hagan arrives at claim 1. Particularly, the Examiner contends that Hagan teaches a method for reducing consumption of power terminals communicating with each other using a beacon interval divided into an Announcement Traffic Indication Message (ATIM) window period and a doze state period according to IEEE standard 802.11 and that van Bokhorst et al. '230 adds the steps of (a) dividing the ATIM window period into an Earlier Time Slot (ETS) section and a Later Time Slot (LTS) section which are distinguished from each other; (b) when a certain terminal has a data packet to be sent to another terminal, transmitting a beacon to each terminal during the ETS section, and when the terminal has no data packet to be sent to that other terminal, transmitting the beacon to each terminal during the LTS section; and (c) when a terminal has received the beacon during the LTS section, allowing it to immediately change its state to the doze state without waiting for the doze state period. Applicant disagrees with this analogy. As described in the background section of the present application, conventional radio terminals send/receive packet transmissions with fixed-length ATIM window periods, followed by a doze period. Receiving radio terminals are

converted into the awake state as they receive the ATIM window period, and may then enter their doze state. The Bokhorst et al. '230 patent suggests a "stay awake" mode exactly similar to the foregoing, plus a "back-to-doze" mode in which a TIM message contains an indication of the number of messages destined for each of the other stations. Thus, if a TIM message indicates that two messages are to be transmitted to station 1 and one message to station 2, when station 2 has received its single message it returns to the doze state for the remainder of the current doze interval. While this approach may save power at station 1, it requires significant communication overhead inasmuch as each TIM message must be encoded to indicate the number of messages destined for each of the other stations, and the receiving stations must decode this. The present invention avoids the overhead by relying on timing rather than message indicators. The present invention effectively divides the TIM window period into an Earlier Time Slot (ETS) section and a Later Time Slot (LTS) section. When a data terminal has no data packet to be sent, it transmits during the LTS section. When a data terminal has a data packet to be sent, it transmits during the ETS section. This way, when a receiving terminal has received a beacon signal during LTS section, it knows not to wait for the doze state period but immediately changes its state to the doze state so that power can be saved. Dividing the ATIM window into ETS and LTS sections is key to the present invention, and is explicit in claim 1 which recites "(a) dividing an ATIM window period into an Earlier Time Slot (ETS) section and a Later Time Slot (LTS) section which are distinguished from each other" and "(b) when a certain terminal has a data packet to be sent to another terminal, transmitting a beacon to each terminal during the ETS section", and

“when the terminal has no data packet to be sent to that other terminal, transmitting the beacon to each terminal during the LTS section”. This way, “(c) when a terminal has received the beacon during the LTS section...it ...immediately change[s] its state to the doze state without waiting for the doze state period.” Neither Hagan nor van Bokhorst et al. ‘230 show or suggest immediately changing the state of a terminal to doze when it receives a beacon during a defined LTS section of a TIM message *without having to wait for the doze state period*. Indeed, neither reference is capable of *immediately triggering a doze state if no data packet is being transmitted*”, except after first processing an indication of the number of messages destined for each of the other stations and staying awake through at least that number of messages (as in Bokhorst et al. ‘230) . Therefore, it is respectfully submitted that the Hagan publication and the van Bokhorst et al. ‘230 patent both fail to render obvious claim 1, and claim 1 is patentably distinguished.

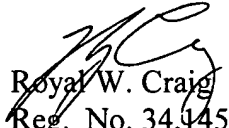
The Examiner also rejected claim 2 under 35 U.S.C. §103 (a) as being unpatentable over van Bokhorst et al. (U.S. Patent No. 6,192,230) and Hagan (Power Savings Mechanisms in Emerging Standards for Wireless LANS: The Mac Level Perspective), and further asserts it would have been obvious to divide the ATIM sections into sections for the awake and doze states to occur automatically to maximize doze time. Again, Applicant asserts that its entire application is based on this feature and the advantages gained thereby, all of which are explicitly set forth. The Examiner’s stance is simply hindsight that sells short Appellant's years of DCF development, glosses over the salient feature, and is unbacked by any evidence that would elevate this viewpoint to a *prima facie* case of obviousness. Claim 2 is distinguished based on

the patentable limitations of claim 1 described above, and also because it requires the ETS and LTS sections be set to a maximum back-off time. Neither van Bokhorst et al. '230 nor the Hagan references teach or suggest the ETS/LTS division at all, let alone the maximum back-off time limitation. Consequently depending claim 2 is patentably distinguished on its own merits.

In light of the amendments and remarks presented above, it is respectfully submitted that the application is in condition for allowance. A Notice to this effect is respectfully requested, and the Examiner is invited to call the undersigned at 410.385.2383 to discuss any remaining issues.

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Respectfully submitted,


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